

EXHIBIT 2

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Paper 11
Date: November 22, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

GESTURE TECHNOLOGY PARTNERS, LLC,
Patent Owner.

IPR2021-00917
Patent 7,933,431 B2

Before JONI Y. CHANG, KRISTI L. R. SAWERT, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

DOUGAL, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

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I. INTRODUCTION

A. *Background and Summary*

Petitioner, Unified Patents, LLC, requests that we institute an *inter partes* review to challenge the patentability of claims 7–13 (the “challenged claims”) of U.S. Patent 7,933,431 B2 (Ex. 1001, “the ’431 patent”). Paper 1 (“Petition” or “Pet.”). Patent Owner, Gesture Technology Partners, LLC, argues that Petitioner’s request is deficient and should not be granted. Paper 6 (“Preliminary Response” or “Prelim. Resp.”). With our authorization, Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 7, “Reply”) and Patent Owner filed a Sur-reply (Paper 8, “Sur-reply”).

Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we grant the Petition and institute an *inter partes* review.¹

B. *Related Matters*

The parties identify the following as related matters involving the ’431 patent: *Gesture Technology Partners, LLC v. Huawei Device Co., Ltd.*, No. 2:21-cv-00040 (E.D. Tex.); *Gesture Technology Partners, LLC v. Samsung Electronics Co.*, No. 2:21-cv-00041 (E.D. Tex.); *Gesture Technology Partners, LLC v. Apple Inc.*, No. 6:21-cv-00121 (W.D. Tex.); *Gesture Technology Partners, LLC v. Lenovo Group Ltd.*, No. 6:21-cv-00122 (W.D. Tex.); and *Gesture Technology Partners, LLC v. LG Electronics, Inc.*, No. 6:21-cv-00123 (W.D. Tex.). Pet. 1; Paper 4, 1. Patent Owner also identifies the following Board proceedings as related matters:

¹ Our findings and conclusions at this stage are preliminary, and thus, no final determinations are made.

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C. The '431 Patent

The '431 patent “relates to simple input devices for computers, particularly, but not necessarily, intended for use with 3-D graphically intensive activities, and operating by optically sensing a human input to a display screen or other object and/or the sensing of human positions or orientations.” Ex. 1001, 2:7–11. The '431 patent further states that it relates to “applications in a variety of fields such as computing, gaming, medicine, and education.” *Id.* at 2:15–17. For instance, the '431 patent describes “a combination of one or more TV cameras (or other suitable electro-optical sensors) and a computer to provide various position and orientation related functions of use.” *Id.* at 11:54–58.

Figure 8A, reproduced below, illustrates the control of functions via a handheld device.

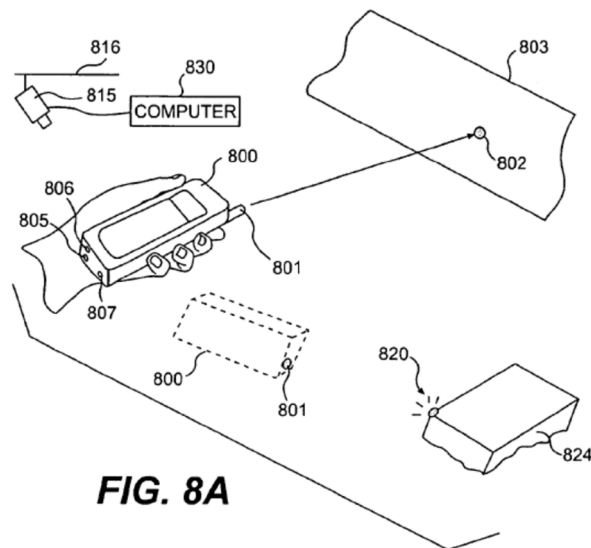


Figure 8A shows a perspective view of a cellular phone (800) using a laser spot projector (801) to project a laser spot on a detector (802) in a dashboard (803). *Id.* at 12:17–20. The '431 patent discloses that, alternatively or in

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conjunction, round dot targets (805, 806, 807) can be sensed on the cellular phone (800), such as by a TV camera (815). *Id.* at 12:20–25.

In another example, the cellular phone (800) can be used to signal a fax unit (824) to print data from the phone by pointing the cellular phone toward the fax unit. *Id.* at 12:42–45. TV camera (815) scans images of the dot targets (805, 806, 807) and a computer (830) analyzes the target images to determine the position and/or orientation or motion of the cellular phone to thereby determine if a command is being issued with movement of the cellular phone. *Id.* at 12:45–51. The computer then commands the fax unit to print if this action is signaled by the position, orientation, or motion of the cellular phone. *Id.* at 12:51–52.

D. Illustrative Claim

Petitioner challenges claims 7–13 of the '413 patent. Claim 7 is the sole independent claim and is illustrative:

7. Handheld computer apparatus comprising:

a housing;

a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object;

computer means within said housing for analyzing said image to determine information concerning a position or movement of said object; and

means for controlling a function of said apparatus using said information.

Ex. 1001, 25:61–26:5.

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II. ANALYSIS

A. Summary of Issues

In the below analysis, we first address the grounds of unpatentability. We then address Patent Owner's discretionary denial and jurisdiction arguments.

B. Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 5), supported by the declaration of Christopher M. Schmandt (Ex. 1003):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
7–9, 11, 12	102(e) ²	Numazaki ³
7, 9, 11	103(a)	Rhoads ⁴
7–12	103(a)	Doi, ⁵ Cousins ⁶
13	103(a)	Doi, Cousins, Parulski ⁷

1. Legal Standards for Unpatentability

Petitioner bears the burden to demonstrate unpatentability. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). At this preliminary stage, we determine whether the information presented in the Petition shows a reasonable likelihood that Petitioner would

² The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102, 103 effective March 16, 2013. Because the challenged patent was filed before March 16, 2013, we refer to the pre-AIA versions.

³ U.S. Patent 6,144,366, issued Nov. 7, 2000 ("Numazaki") (Ex. 1007).

⁴ U.S. Patent Application Publication 2005/0013462 A1, published Jan. 20, 2005 ("Rhoads") (Ex. 1004).

⁵ U.S. Patent 6,266,061 B1, issued July 24, 2001 ("Doi") (Ex. 1005).

⁶ U.S. Patent 6,417,797 B1, issued July 9, 2002 ("Cousins") (Ex. 1006).

⁷ U.S. Patent 5,666,159, issued Sept. 9, 1997 ("Parulski") (Ex. 1008).

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prevail in establishing that at least one of the challenged claims would have been unpatentable. *See* 35 U.S.C. § 314(a).

“A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). Moreover, “[b]ecause the hallmark of anticipation is prior invention, the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). Whether a reference anticipates is assessed from the perspective of an ordinarily skilled artisan. *See Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368 (Fed. Cir. 2003).

A claim is unpatentable as obvious under 35 U.S.C. § 103 if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). We resolve the question of obviousness based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the prior art and the claims; (3) the level of skill in the art; and (4) when in evidence, objective indicia of nonobviousness. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We apply these principles to the Petition’s challenges.

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2. *Level of Ordinary Skill in the Art*

Petitioner asserts that “[a] person of ordinary skill in the art at and before the priority date for the ’431 Patent (‘POSITA’) would have had a bachelor’s degree in computer science, computer engineering, electrical engineering, or a related subject, and one to two years of work experience with human-computer interaction” and that less experience may be necessary with additional education and vice versa. Pet. 9 (citing Ex. 1003 ¶¶ 36–40). Patent Owner does not dispute Petitioner’s level of ordinary skill in the art. Prelim. Resp. 5.

We are persuaded, on the present record, that Petitioner’s declarant’s statement is consistent with the problems and solutions in the ’431 patent and prior art of record. We adopt this definition for the purposes of this Decision.

3. *Claim Construction*

In *inter partes* review, we construe claims using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b), including construing the claims in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b) (2020).

Petitioner provides a number of claim constructions. Pet. 13–17. Patent Owner does not contest Petitioner’s claim constructions, but does argue that the preamble of claim 7 should be limiting. Prelim. Resp. 5–6. We address each construction below.⁸

⁸ As noted below, for the purposes of institution, we accept all of Petitioner’s proposed constructions, as well as Patent Owner’s argument that the preamble of claim 7 is limiting. However, we invite the parties to address

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a) Claim 7's Preamble

The preamble of claim 7 states: “Handheld computer apparatus comprising” Ex. 1001, 25:61. Petitioner does not address whether the preamble of claim 7 is limiting, but rather attempts to show that, independent of whether it is limiting, the preamble is taught by the prior art. *See e.g.* Pet. 21 (“To the extent the preamble is limiting, the combined teachings of Doi and Cousins render it obvious”).

Patent Owner argues that the preamble should be limiting because it recites essential structure or steps and is “necessary to give life, meaning, and vitality” to claim 7. Prelim. Resp. 6 (quoting *Acceleration Bay, LLC v. Activision Blizzard, Inc.*, 908 F.3d 765, 770 (Fed. Cir. Nov. 6, 2018)). Specifically, Patent Owner asserts that claim 7’s final limitation refers back to the preamble’s “handheld computer apparatus” for antecedent basis. *Id.* Patent Owner further argues that the ’413 patent discloses different embodiments, with some embodiments being in the form of a computer and some embodiments being in the form of a handheld device. *Id.* at 6–7 (citing Ex. 1001, 12:59–13:7, Fig. 1A). Patent Owner contends that claim 7 claims the latter embodiments because claim 7 recites a handheld device and, therefore, “the preamble is necessary to give life, meaning, and vitality to claim 7, consistent with the embodiments that the inventor chose to claim.” *Id.* at 7.

We agree that the preamble of claim 7 is limiting. This is primarily because the last clause of claim 7 refers back to the preamble and is understood with reference thereto. The last clause states: “means for

how these constructions are impacted by the District Court Claim Construction Memorandum and Order (Ex. 2004) which was issued after the pre-institution briefing was submitted.

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controlling a function of *said apparatus* using said information.” Ex. 1001, 26:4–5 (emphasis added). “Said apparatus” derives antecedent basis from “[h]andheld computer apparatus” recited in the preamble. Moreover, the “means for controlling a function of said apparatus” can be understood because of this reference to the handheld computer apparatus. Thus, we agree that the preamble recites essential structure and is “necessary to give life, meaning, and vitality” to claim 7.

b) “camera means associated with said housing”

Claim 7 recites “a camera means associated with said housing.” Ex. 1001, 25:63. Petitioner argues that “[t]he phrase ‘associated with’ in the claim term ‘camera means associated with said housing’ should not be interpreted to require the camera means to be within the recited housing.” Pet. 13. Specifically, Petitioner asserts that “claim 7 uses the phrase ‘associated with’ to describe the relationship between the ‘camera means’ and the ‘housing,’ while the claim uses the different adjective ‘within’ to describe the relationship between the ‘computer means’ and the ‘housing.’” *Id.* Petitioner contends that this is consistent with dictionary definitions for “associate” and “within,” and that requiring the camera means to be “within” the housing would exclude a disclosed embodiment. *Id.* at 13–14 (citing Ex. 1017; Ex. 1001, 12:1–9).

As noted above, Patent Owner does not contest Petitioner’s constructions. Prelim. Resp. 5. For the purposes of institution, we accept Petitioner’s construction.

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- c) *“camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object”*

Petitioner asserts that claim 7’s limitation of “camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object” is a means-plus-function limitation under §112 ¶ 6. Pet. 14. Petitioner argues that the limitation’s function “is obtaining an image using reflected light of at least one object positioned by a user operating said object” and the corresponding structure “is one or more TV cameras (e.g., TV camera 815) or other suitable electro-optical sensors, and equivalents thereof.” *Id.* (citing Ex. 1001, 3:15–29; Ex. 1003 ¶¶ 50–51).

As noted above, Patent Owner does not contest Petitioner’s constructions. Prelim. Resp. 5. For the purposes of institution, we accept Petitioner’s construction.

- d) *“computer means within said housing for analyzing said image to determine information concerning a position or movement of said object”*

Petitioner contends that claim 7’s limitation of “computer means within said housing for analyzing said image to determine information concerning a position or movement of said object” is a means-plus-function limitation under §112 ¶ 6. Pet. 15. Petitioner argues that the limitation’s function “is analyzing an image to determine information concerning a position or movement of an object” and the corresponding structure “is a general purpose computer programmed with an algorithm to cause the general purpose computer to: (1) analyze target image(s) of an object captured by the camera means; and (2) determine position(s) of the object.”

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Id. (citing Ex. 1001, 6:9–18, 7:22–29, 12:1–9, 12:46–52, 17:34–50; Ex. 1003 ¶¶ 53–36).

As noted above, Patent Owner does not contest Petitioner’s constructions. Prelim. Resp. 5. For the purposes of institution, we accept Petitioner’s construction.

e) “*means for controlling a function of said apparatus using said information*”

Petitioner argues that claim 7’s limitation of “means for controlling a function of said apparatus using said information” is a means-plus-function limitation under §112 ¶ 6. Pet. 15. According to Petitioner, the limitation’s function “is controlling a function of said apparatus using said information” and the corresponding structure “is a general purpose computer programmed with an algorithm to cause the general purpose computer to” (1) receive position information, (2) correlate the position information with a function of the apparatus, and (3) cause the apparatus to perform the function, wherein the function includes one or more of: (a) a display function, (b) a command to print, (c) an image transmission function, or (d) an e-mail transmission function. *Id.* at 15–16 (citing Ex. 1001, 12:46–52, 12:65–66, 13:36–40, 13:63–67, 26:8–9; Ex. 1003 ¶¶ 58–59).

As noted above, Patent Owner does not contest Petitioner’s constructions. Prelim. Resp. 5. However, as discussed above, we determine that “said apparatus” refers to the handheld computer apparatus in the preamble. Thus, for the purposes of institution, we accept Petitioner’s construction with the added requirement that the general purpose computer be a handheld computer apparatus.

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f) “means for transmitting information”

Petitioner asserts that claim 11’s limitation of “means for transmitting information” is a means-plus-function limitation under §112 ¶ 6. Pet. 17. Petitioner argues that the limitation’s function “is transmitting information” and the corresponding structure “is a mobile phone link and equivalents thereof.” *Id.* (citing Ex. 1001, 12:65–13:3; Ex. 1003 ¶¶ 61–62).

As noted above, Patent Owner does not contest Petitioner’s constructions. Prelim. Resp. 5. For the purposes of institution, we accept Petitioner’s construction.

4. Anticipation by Numazaki

Petitioner argues that Numazaki anticipates claims 7–9, 11, and 12. Pet. 35–42. Patent Owner contends that Numazaki does not disclose all the limitations of independent claim 7, and therefore does not disclose all the limitations of claims 8, 9, 11, and 12 which depend therefrom. Prelim. Resp. 20–25.

We first give a short overview of the asserted prior art, Numazaki. This is followed by a discussion of Petitioner’s position and Patent Owner’s arguments in response where we conclude that Petitioner has demonstrated a reasonable likelihood of prevailing.

a) Numazaki

Numazaki “relates to a method and an apparatus for generating information input in which input information is extracted by obtaining a reflected light image of a target object.” Ex. 1007, 1:8–11. Figure 1, reproduced below, depicts a block diagram for an information input generation apparatus.

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FIG.1

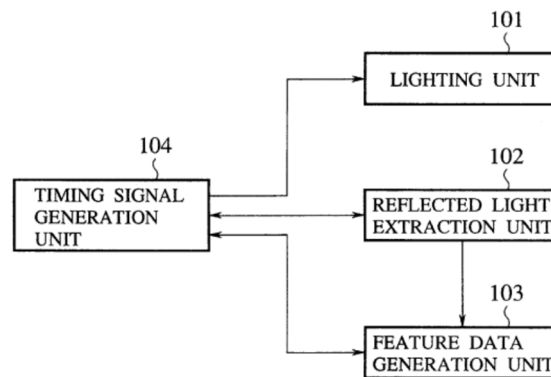


Figure 1 shows an information input generation apparatus including a lighting unit (101), a reflected light extraction unit (102), a feature data generation unit (103), and a timing signal generation unit (104). *Id.* at 10:23–28. Numazaki describes emitting light from the light emitting unit (101) and that the intensity of the light varies in time according to a timing signal from the timing signal generation unit (104). *Id.* at 10:29–31. The light is directed onto a target object and light reflected from the target object is extracted by the reflected light extraction unit (102). *Id.* at 10:31–35. Numazaki teaches that the feature data generation unit (103) extracts feature data from the reflected light image. *Id.* at 10:57–61. Numazaki further teaches operating a computer based on information obtained from the feature data. *Id.* at 10:61–66.

Figure 78, reproduced below, illustrates an information input generation apparatus.

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FIG.78

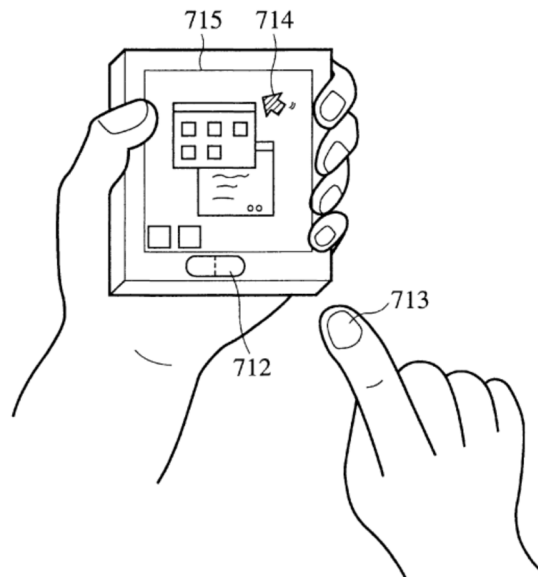


Figure 78 shows “a compact portable information device” having “a size that can be held by one hand.” *Id.* at 52:5–8. The device includes a window (712) for a lighting unit and a photo-detection sensor unit. *Id.* at 52:12–14.

Numazaki describes controlling the position of a cursor (714) on a screen by moving a finger (713) in front of the window (712). *Id.* at 52:14–16.

b) Claim 7

Petitioner relies on Numazaki for teaching all of the elements of claim 7. Pet. 36–41. For example, Petitioner relies on the compact portable information device for teaching the handheld computer apparatus of claim 7. *Id.* at 36 (citing Ex. 1007, 52:5–8; Ex. 1003 ¶¶ 139–141); *see also* Ex. 1007, Fig. 78. Petitioner argues that Numazaki teaches a photo-detection sensor unit inside the housing of the compact portable information device which reads on the camera means associated with a housing of the claim. Pet. 36–38 (citing Ex. 1007, 52:8–14, Fig. 78; Ex. 1003 ¶¶ 142–143, 151). Petitioner argues that the feature data generation unit 103 in Numazaki would be understood to be the claimed computer means. *Id.* at 38–39 (citing Ex. 1007,

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10:57–61, 16:27–28, 17:19–23, 17:51–56; Ex. 1003 ¶¶ 156–160). Petitioner also argues that Numazaki’s teaching of a computer process to use a fingertip to control a cursor reads on the claimed “means for controlling a function of said apparatus using said information.” Pet. 39–41 (citing Ex. 1007, 26:8–18, 26:23–25, 52:14–16; Ex. 1003 ¶¶ 161–165).

Patent Owner argues that Numazaki does not teach aspects of the camera means and computer means claim elements. Prelim. Resp. 20–23. We address each argument in turn below.

(1) Camera Means

Claim 7 requires “a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object.” Ex. 1001, 25:63–65. Petitioner argues that this limitation is subject to 35 U.S.C. § 112 ¶ 6, and that the relevant structure “is one or more TV cameras (e.g., TV camera 815) or other suitable electro-optical sensors, and equivalents thereof.” Pet. 14 (citing Ex. 1001, 3:15–19).

As noted above, Petitioner argues that Numazaki teaches a photo-detection sensor unit inside the housing of the compact portable information device, which reads on the camera means associated with a housing as claimed. Pet. 36–38 (citing Ex. 1007, 52:8–14, Fig. 78; Ex. 1003 ¶¶ 142–143, 151).

Numazaki only provides some details about the photo-detection sensor unit. *See generally* Ex. 1007, 50:25–54:6. However, Petitioner relies on Numazaki’s statement that “the disclosure of the first through seventh embodiments applies to the eighth embodiment” for more details about the photo-detection sensor unit. Pet. 37 (quoting Ex. 1007, 50:21–24). In particular, Petitioner equates the photo-detection sensor unit with the reflected light extraction unit (102) and photo-detection optics (107) of the

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first embodiment. *Id.* Petitioner argues that the “‘reflected light extraction unit 102’ . . . ‘extracts the reflected light from the target object.’” *Id.* (quoting Ex. 1007, 10:33–35). And that this extraction is done using photo-detection optics (107). *Id.* (citing Ex. 1007, 11:11–15). Petitioner concludes that “*Numazaki* discloses the function and corresponding structure of the recited *camera means . . . for obtaining an image using reflected light of at least one object*, as the structure corresponding to the *camera means* limitation includes at least electro-optical sensors, such as those disclosed in *Numazaki*. *Id.* (citing Ex. 1003 ¶¶ 148–150).

Patent Owner first argues that “*Numazaki* fails to provide any details regarding the function of the ‘photo-detection sensor unit’ and thus fails to disclose the ‘photo-detection sensor unit’ obtains an image, as required by [this] claim element. Prelim. Resp. 20. We disagree on this record.

The function of the photo-detection sensor unit is taught in a number of locations in *Numazaki*. For example, *Numazaki* at 52:8–14 (cited at Pet. 37) teaches that “a window **712** is provided for the lighting unit and the photo-detection sensor unit” to enable the function of “lighting and photo-detecting on an external body.” The paragraph continues to teach that “[a] position of a cursor **714** on the screen can be controlled by moving a finger **713** in front of this window **712**.” Ex. 1007, 52:14–16. Thus, the function of the photo-detection sensor unit is taught by *Numazaki*. Further, this description of the function of the photo-detection sensor unit is consistent with *Numazaki*’s more detailed discussion of the reflected light extraction unit and photo-detection optics, which teaches obtaining an image. *See* Ex. 1007, 10:33–35, 11:11–15 (“an image is formed on a photo-detection plane of the reflected light extraction unit 102 by a photo-detection optics 107.”); Pet. 37.

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Patent Owner also argues that, because they “hav[e] different names, Numazaki’s ‘photo-detection sensor unit’ and Numazaki’s ‘reflected light extraction unit’ must be different units with different functions.” Prelim. Resp. 21. Patent Owner’s argument misunderstands Petitioner’s position. The Petition equates Numazaki’s photo-detection sensor unit with Numazaki’s reflected light extraction unit (102) *and* photo-detection optics (107). Pet. 37. At the same time, Patent Owner is trying to equate Numazaki’s photo-detection sensor unit with only Numazaki’s reflected light extraction unit, which does appear to reflect the teachings of Numazaki or the position in the Petition.

For the above reasons, Patent Owner’s arguments do not identify any shortcomings in the showing by Petitioner that Numazaki teaches all the aspects of the camera means claim element.

(2) *Computer Means*

Claim 7 requires “computer means within said housing for analyzing said image to determine information concerning a position or movement of said object.” Ex. 1001, 26:1–3. Petitioner argues that this limitation is subject to 35 U.S.C. § 112 ¶ 6, and that the relevant structure “is a general purpose computer programmed with an algorithm to cause the general purpose computer to: (1) analyze target image(s) of an object captured by the camera means; and (2) determine position(s) of the object.” Pet. 15 (citing e.g. Ex. 1001, 12:46–52).

Petitioner argues that Numazaki’s feature data generation unit 103 “which ‘extracts [] information . . . from the reflected light image’ would be understood to be the claimed computer means. *Id.* at 38–39 (quoting Ex. 1007, 10:57–61). Petitioner further argues, among other things, that consistent with the above computer program, Numazaki teaches “that

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‘[w]hen the hand is used as the target object, it is possible to capture the **information on a position** and a shape of the hand without a contact, so that it is possible to utilize the present invention as a means for inputting information.’” *Id.* at 39 (quoting Ex. 1007, 17:19–23).

Patent Owner argues that:

Numazaki requires: (1) two, not one, photo-detection units; (2) a lighting unit for illumination; (3) timing circuitry that selectively activates the lighting unit based on which photo-detection unit is active; and (4) circuitry for subtracting one image from another. Simply put, this is fundamentally different than the apparatus recited in claim 7.

Prelim. Resp. 22; *see id.* (describing Numazaki in more detail) (citing Ex. 1007, 10:57–66, 11:20–56, Fig. 2).

Patent Owner further argues that:

The alleged “computer means” disclosed in Numazaki cannot analyze target images of an object from one TV camera. The alleged “computer means” disclosed in Numazaki cannot analyze target images without a lighting unit to illuminate the object. And the alleged “computer means” disclosed in Numazaki cannot analyze target images of an object without circuitry for subtracting one image from another. Accordingly, Numazaki does not disclose corresponding structure for performing the recited function of [the] claim element.

Id. at 22–23 (emphases omitted).

We are persuaded, however, that Petitioner has adequately shown on this record that Numazaki teaches the claimed computer means.

First, Patent Owner acknowledges that “[u]nder Petitioner’s proposed construction, the corresponding structure for the ‘camera means . . .’ term is ‘one or more TV cameras,’” but Patent Owner nevertheless appears to argue that the camera means requires one camera and that the computer means analyzes images from only that one camera. *Id.* (quoting Pet. 14). Patent

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Owner does not identify why the claim should be limited to one camera or one image. As Petitioner argued in its claim construction and Patent Owner did not dispute, structure in the '431 patent for the camera means is "one or more TV cameras (or other suitable electro-optical sensors)." Ex. 1001, 3:17–18; Pet. 14. Moreover, we find that the '431 patent appears to expressly contemplate one or more TV cameras. *See* Ex. 1001, 3:25 ("A stereo pair of cameras **100** and **101**"), 3:44 ("a three camera arrangement can be used"). Patent Owner does not identify, and we were not able to find, any disclosure in the '431 patent that these multiple cameras are used to obtain only a single image to support Patent Owner's argument that the claim should be limited in this way.

Further, though the claim refers to "obtaining an image" and "analyzing said image," this does not limit the claim, at least on this record, to only one image. Unless a more limited construction is indicated by the specification or prosecution history, the indefinite article "a" or "an" is construed in a claim to mean "one or more." *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. Aug. 18, 2000). Thus, based on the current record, the claim appears to encompass obtaining one or more images, and analyzing those one or more images.

Second, as to Patent Owner's argument that Numazaki requires a lighting unit for illumination, claim 7 uses the term "comprising" to create an "open ended" claim. "'Comprising' is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim." *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997). Thus, the presence of a lighting unit is not excluded from the claim. Rather, the '431 patent teaches the use of LEDs "to illuminate [associated] targets"

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and claim 12, which depends from claim 7, expressly requires “a light source for illuminating said object.” Ex. 1001, 3:34–35, 26:14–15.

Third, it is not clear what relevance Patent Owner’s following statement has to the claim: “Numazaki cannot analyze target images of an object without circuitry for subtracting one image from another.” This level of detail on how the target images are analyzed by the computer does not appear to be implicated by the current claim construction. Thus, even if true, the statement does not identify errors in the Petition.

For all of these reasons, we determine that the Petition has established a reasonable likelihood of success with respect to claim 7.

c) Claims 8, 9, and 12

Petitioner argues that Numazaki anticipates dependent claims 8, 9, and 12. Pet. 41–42. Patent Owner does not contest Petitioner’s assertions regarding these claims at this stage. *See generally* Prelim. Resp. We have reviewed Petitioner’s assertions and the supporting evidence, and determine that Petitioner has established a reasonable likelihood of prevailing with respect to claims 8, 9, and 12.

d) Claim 11

Dependent claim 11 recites “Apparatus according to claim 7, further including means for transmitting information.” Ex. 1001, 26:12–13. As noted previously, Petitioner argues that the “means for transmitting information” is subject to 35 U.S.C. § 112 ¶ 6, and that “[t]he structure corresponding to this function is a mobile phone link and equivalents thereof.” Pet. 17 (citing Ex. 1001, 12:65–13:3).

Petitioner argues that “Numazaki discloses this limitation.” *Id.* at 42. This is because “Numazaki describes a ‘transmission unit 356’ which

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‘transmits the extracted image.’” *Id.* (quoting Ex. 1007, 40:45–49); *see also* Ex. 1003 ¶ 172 (Petitioner’s Declarant making an identical statement).

Patent Owner correctly notes that “the Petition fails to provide any analysis regarding whether Numazaki discloses this limitation under Petitioner’s proposed construction of the term ‘means for transmitting information.’” Prelim. Resp. 24. Patent Owner also correctly states that “[t]he Petition states that Numazaki performs the recited function, but fails to address whether Numazaki discloses the same corresponding structure that the Petition identifies in Petitioner’s proposed construction.” *Id.*

On this record, Patent Owner’s arguments appear to have merits. Nevertheless, we do not need to determine whether Petitioner’s showing for claim 11 is sufficient in light of our determination regarding at least claim 7. Therefore, pursuant to 37 C.F.R. § 42.108(a), which implements the decision in *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018) (“*SAS*”), we institute as to all claims challenged in the petition and on all grounds in the petition. *See also* PTAB Consolidated Trial Practice Guide (Nov. 2019) (“Consolidated Guide”),⁹ 5–6, 64.

Patent Owner is encouraged to resubmit its arguments in the Patent Owner Response. Patent Owner is cautioned that any arguments not raised in the Response may be deemed waived.

5. *Obviousness over Rhoads*

Petitioner asserts that claims 7, 9, and 11 of the ’431 patent would have been obvious over Rhoads. Pet. 42–51. Patent Owner argues that the combination as presented in the Petition does not disclose all the limitations of the claims. Prelim. Resp. 25–30.

⁹ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

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We first give a short overview of the asserted prior art, Rhoads. This is followed by a discussion of Petitioner's position and Patent Owner's arguments in response.

a) Rhoads

Rhoads relates to “optical user interfaces that sense digitally-encoded objects” and “further relates to systems using such optical interfaces to control computers, and to navigate over or act as portals on networks.” Ex. 1004 ¶ 2.

Rhoads' Figure 1 is reproduced below.

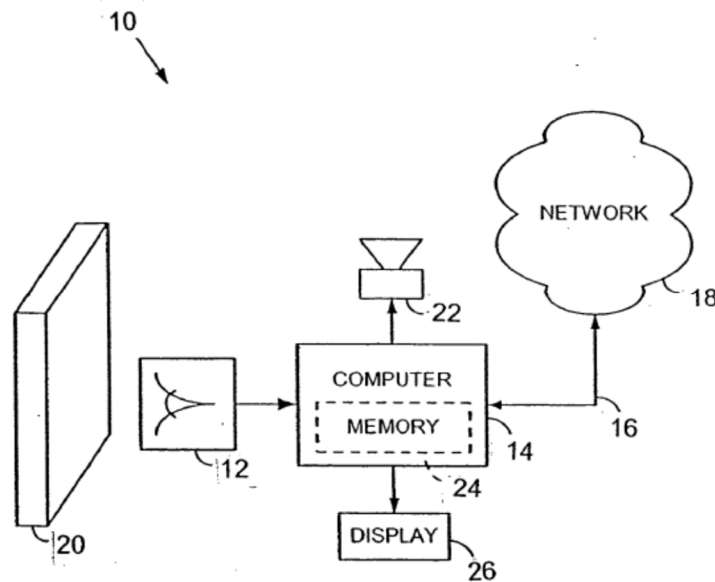


Figure 1 shows an embodiment (10) of Rhoads's invention, which includes an optical sensor (12), a computer (14), and a network connection (16) to the internet (18). *Id.* ¶ 16. Rhoads teaches that the optical sensor (12) can be a digital camera that takes frames of image data, which is analyzed by the computer (14) for the presence of “Bedoop data” (data that “is any form of digital data encoding recognized by the system 10---data which, in many embodiments, initiates some action”). *Id.* For instance, Rhoads describes integrating the apparatus into the door of a refrigerator for use in compiling a

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shopping list, such as by holding up a milk carton with Bedoop-encoded packaging to the optical sensor (12) so the computer (14) can detect the presence of the Bedoop data and add data identifying the milk to a grocery list. *Id.* ¶ 18.

Rhoads also describes determining “the scale state, rotation state, X-Y offset, and differential scale state, of an object by reference to embedded calibration data, or other techniques.” *Id.* ¶ 144. For instance, Rhoads discloses moving an object left or right in front of a scanner to cause a left- or right-positioned button in a dialog box to be selected. *Id.* ¶ 145. In another example, Rhoads describes holding a business card in front of a scanner and, if the card is twisted to the left, a computer opens a web browser according to Bedoop data on the card. *Id.* ¶ 147. If the card is twisted to the right, the computer opens an email template according to an email address on the card. *Id.*

b) Claim 7

Petitioner relies on Rhoads for teaching or suggesting all the elements of claim 7. Pet. 43–50. For example, Petitioner points to Rhoads’ teaching that the system “can be portable” and can be a palmtop computer for teaching the handheld computer apparatus of claim 7. *Id.* at 43–44.

Petitioner argues that “[a] POSITA would have recognized such palmtop computers to include a *housing* as recited” in the claim. *Id.* at 44. Petitioner argues that Rhoads’ teaching of optical sensor arrays, optical sensor, and digital camera is consistent with the claimed camera means disclosed in the ’431 patent. *Id.* at 45. Petitioner further argues that the claimed computer means and means for controlling a function is taught or suggested by the computer and associated processes taught by Rhoads. *Id.* at 47–51.

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Patent Owner argues that Rhoads does not teach a handheld computer apparatus or the claimed computer means. Prelim. Resp. 25–28. We address each argument in turn.

(1) Handheld Computer Apparatus

As discussed above, we agree with Patent Owner, based on the current record, that the preamble of claim 7 is limiting. *See above* § II.B.3.a. Thus, claim 7 requires a handheld computer apparatus. Patent Owner argues that a palmtop computer as taught by Rhoads is not a handheld computer apparatus. Prelim. Resp. 26.

Patent Owner acknowledges that the Petition relies on the Microsoft Computer Dictionary (Ex. 1011) to support Petitioner’s position that a person of ordinary skill would understand Rhoads’ palmtop computer to be a handheld computer apparatus. Prelim. Resp. 26. However, Patent Owner argues that “[t]he Microsoft Computer Dictionary does not state that a palmtop is a handheld device.” *Id.*

The Microsoft Computer Dictionary defines “palmtop” as “[a] portable personal computer whose size enables it to be held in one hand while it is operated with the other hand.” Ex. 1011, 330. Patent Owner does not articulate why a computer “held in one hand” is not a handheld device, and our reading of the definition leads us to conclude that the Microsoft Computer Dictionary *does* state that a palmtop is a handheld device, contrary to Patent Owner’s unsupported attorney argument.

Patent Owner also relies on the fact that “the same dictionary contains a separate definition for ‘handheld PC,’ which indicates that a palmtop is not a handheld PC.” Prelim. Resp. 26 (citing Ex. 1011, 330). The definition of “handheld PC” from the Microsoft Computer Dictionary is not actually in evidence, as Exhibit 1011 contains only excerpts of the dictionary. But

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Patent Owner appears to be relying on the fact that at the end of the definition for “palmtop” the dictionary states: “*See also* handheld PC, PCMCIA slot, portable computer. *Compare* laptop.” Ex. 1011, 330. It is not clear on this record why the inclusion of multiple related terms would mean that the terms are exclusionary of one another. If that were the case, then neither a palmtop nor a handheld PC could be a portable computer, as that term is also listed as having a related definition.

Further, we discern on this record no limitation in the claims that the handheld computer apparatus be a handheld *PC* or have any particular type of operating system. Thus, this argument does not identify any errors in the support relied upon in the Petition.

Patent Owner also argues that the Schmandt Declaration “is conclusory and merely parrots the arguments from the Petition.” Prelim. Resp. 26. We are not persuaded on this record, because the relevant conclusions in the Schmandt Declaration appear to be supported by the dictionary definition discussed above. *See* Ex. 1004 ¶ 183 (citing Ex. 1011, 330).

Patent Owner also argues that “Rhoads . . . contradicts Petitioner’s assertion that the ‘palmtop computer’ is a handheld computer apparatus.” Prelim. Resp. 26. Patent Owner argues that, although the Petition relies on Rhoads’ paragraph 288 for teaching a palmtop computer, paragraph 289 “discloses an actual handheld device” that “is not a computer apparatus, but merely a sensor that provides image information to a separate computer that is not handheld.” *Id.*

Rhoads’ paragraph 288 states “[a]lthough the illustrated Bedoop systems are generally stationary, they need not be so. They can be portable. Some such systems, for example, employ palmtop computers equipped with

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optical sensor arrays.” Paragraph 289 discloses “[a]nother variant” where the system “is a Bedoop sensor that is movable around a desk or other work-surface, like a mouse” that “can be coupled to the associated computer by cabling, or a wireless interface can be used.” Paragraph 289 does not contradict the teachings of paragraph 288, but merely discloses “another variant” that functions in a different manner than the palmtop computer based Bedoop system. Thus, on this record, we find that Patent Owner’s argument also does not undermine Petitioner’s showing regarding the “handheld computer apparatus” limitation.

(2) *Computer Means*

Claim 7 requires “computer means within said housing for analyzing said image to determine information concerning a position or movement of said object.” Ex. 1001, 26:1–3. The Petition argues that this element is taught by the prior art “because *Rhoads* describes a palmtop computer with a processor that recognizes the movement of an object and responds accordingly.” Pet. 49; *see also id.* at 47–48 (discussing the corresponding structure in the ’431 patent and the teachings of *Rhoads* in more detail).

However, Patent Owner identifies that the processor in the palmtop computer does not appear to be the same processor that recognizes the movement of an object and responds accordingly. Prelim. Resp. 28. Patent Owner argues that the Petition relies on *Rhoads*’ ¶ 404 for teaching the processor within the housing of the palmtop computer (*id.*), but this only teaches that the processor can “decode watermarked data” and initiate “links based on the decoded data” (Ex. 1004 ¶ 404). The Petition relies on other teachings for recognizing the movement of an object and responding, which is not taught as being within “decod[ing] the watermarked data.” *Id.*

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Patent Owner's argument also appears to be consistent with the teaching of Rhoads' ¶ 288 that teaches that some "Bedoop applications . . . rely on remote computers" for analyzing data obtained by a palmtop computer. Nevertheless, we do not need to determine whether Petitioner's showing for claim 7 under Rhoads is sufficient in light of our determination regarding at least claim 7 under the ground based on Numazaki. Therefore, pursuant to 37 C.F.R. § 42.108(a) implementing the decision in *SAS*, we institute as to all claims challenged in the petition and on all grounds in the petition. *See also* Consolidated Guide, 5–6, 64. Patent Owner is encouraged to resubmit its arguments in the Patent Owner Response.

c) Claim 9

Claim 9 depends from claim 7. For claim 9, Patent Owner relies on the same argument in connection with claim 7. Prelim. Resp. 29. As noted above, we are persuaded on this record that Patent Owner's argument is consistent with Rhoads. Nevertheless, we do not need to determine whether Petitioner's showing for claim 9 under Rhoads is sufficient in light of our determination regarding at least claim 7 under the ground based on Numazaki. Therefore, pursuant to 37 C.F.R. § 42.108(a), we institute as to all claims challenged in the petition and on all grounds in the petition. *See also* Consolidated Guide, 5–6, 64.

d) Claim 11

Dependent claim 11 recites "Apparatus according to claim 7, further including means for transmitting information." Ex. 1001, 26:12–13. As noted previously, Petitioner argues that the "means for transmitting information" is subject to 35 U.S.C. § 112 ¶ 6, and that "[t]he structure corresponding to this function is a mobile phone link and equivalents thereof." Pet. 17 (citing Ex. 1001, 12:65–13:3).

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Petitioner argues that this limitation would have been obvious over Rhoads because “*Rhoads* describes that a ‘basic embodiment 10 of the present invention includes ... a network connection 16 to the internet 18.’” *Id.* at 51 (quoting Ex. 1004 ¶ 16).

Patent Owner notes that “the Petition fails to provide any analysis regarding whether Rhoads discloses this limitation under Petitioner’s proposed construction of the term ‘means for transmitting information.’” Prelim. Resp. 29. Patent Owner also states that “[t]he Petition states that Cousins performs the recited function, but fails to address whether Cousins discloses the same corresponding structure that the Petition identifies in Petitioner’s proposed construction.” *Id.* at 29–30.

On this record, we are persuaded that Patent Owner’s arguments have merits. Nevertheless, we do not need to determine whether Petitioner’s showing for claim 11 under Rhoads is sufficient in light of our determination regarding at least claim 7 under the ground based on Numazaki. Therefore, pursuant to 37 C.F.R. § 42.108(a), we institute as to all claims challenged in the petition and on all grounds in the petition. *See also* Consolidated Guide, 5–6, 64.

6. *Obviousness over Doi and Cousins*

Petitioner asserts that claims 7–12 of the ’431 patent would have been obvious over Doi and Cousins. Pet. 17–33. Patent Owner presents a number of arguments that the Petition is insufficient. Prelim. Resp. 7–19.

We first give a short overview of the asserted prior art, Doi and Cousins. This is followed by a discussion of Petitioner’s position and Patent Owner’s arguments in response.

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a) *Doi*

Doi “relates to a user interface apparatus and an input method of performing input by image processing.” Ex. 1005, 1:9–11. Doi describes a user interface apparatus that is applicable to, for example, a computer with a graphical user interface. *Id.* at 7:13–14. The user interface apparatus includes a display screen to display objects, such as a cursor and application icons, and an input device is used to input instructions, such as to move the cursor or start an application. *Id.* at 7:14–19. Doi teaches that the input device can receive input via image processing of an object, such as a user’s hand, and can replace the use of a computer mouse. *Id.* at 7:19–22. Figure 3, reproduced below shows a display screen and an input device.

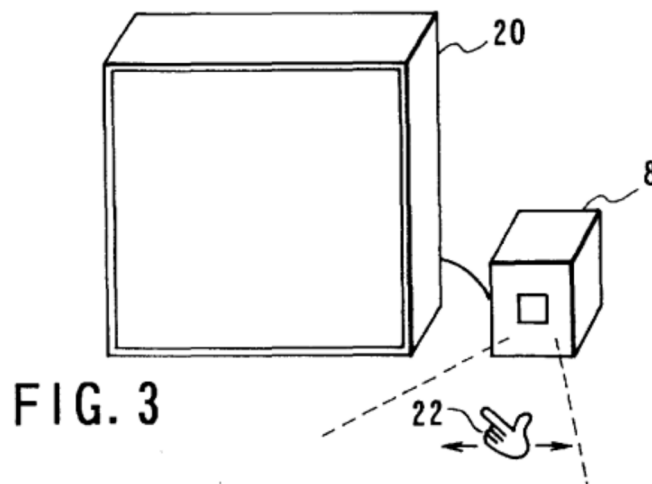


Figure 3 “is a view for explaining the relationship between a display device, the housing of the image input unit, and an object.” *Id.* at 5:47–49. Figure 2, reproduced below, shows a block diagram of an exemplary image input unit.

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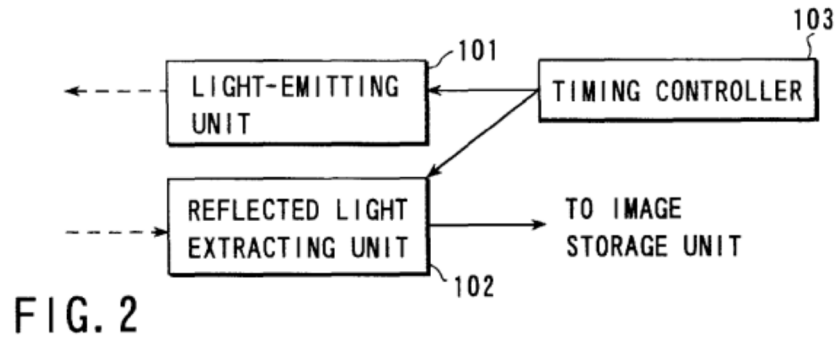


Figure 2 shows an image input unit's light-emitting unit (101), reflected light extracting unit (102), and timing controller (103). *Id.* at 7:44–46. Doi describes the light-emitting unit (101) as irradiating light onto an object and the reflected light extracting unit (102) receiving reflected light from the object. *Id.* at 7:46–51. The timing controller (103) controls the operation timings of the light-emitting unit (101) and the reflected light extracting unit (102) so that a difference between the reflected light received by the reflected light extracting unit (102) and the light produced by the light-emitting unit (101) can be used to correct for a background, thereby permitting extraction of light reflected by an object. *Id.* at 7:51–60. Doi also teaches that the image input unit does not need to have a light-emitting unit but “can have only a light-receiving unit such as a CCD camera.” *Id.* at 7:60–62.

Doi further describes interpretation rules for shape interpretation. *Id.* at 8:35–36. For instance, Doi discloses treating the state of a user's open and raised thumb and index finger as indicating cursor movement, treating the state of a user's closed and raised thumb and index finger to indicate selection of an icon, and treating the state of a user's raised thumb and index finger and turned palm as indicating the start of an application. *Id.* at 8:46–58.

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b) Cousins

Cousins is directed “to a multi-purpose portable imaging device, and more particularly to a device for displaying images from sensors embedded in a hand-held device.” Ex. 1006, 1:19–22. Figure 2, reproduced below, shows a perspective view of a portable multi-purpose imaging device.

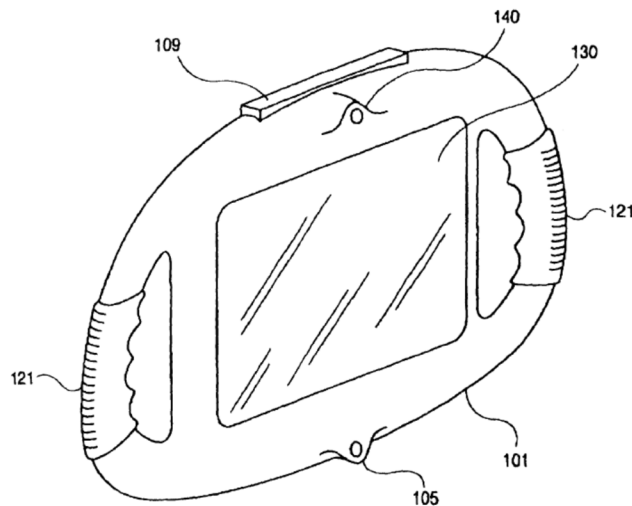
**Figure 2**100

Figure 2 is a bottom view of a multi-purpose imaging device (100) including a sensor array (130), such as radar transducers, and a CCD camera (140). *Id.* at 7:10–21. A display can be included on the top side, opposite from the view illustrated. *Id.* at 5:17, Fig. 1.

Cousins teaches that the imaging device may be used to scan an area to produce a representational and accurate 3D map which can be displayed on the device. *Id.* at 6:57–59. Cousins also teaches that the digital data from the portable device can be sent to “an advanced computer” or an “expert machine” for additional processing. *Id.* at Abstract, 13:34. Cousins further explains that the “[p]ortability of imaging device 100 is increased through use of personal communication systems to tap into remote expert systems.” *Id.* at 13:65–67.

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c) Claim 7

Petitioner argues that, while Doi “teach[es] most of the subject matter of claim 7,” including “a computer having a graphical user interface,” “it does not explicitly disclose that such a computer is handheld as recited in the preamble of claim 7.” Pet. 18. For this reason, the Petition relies on Cousins for teaching a handheld device with a graphical user interface. *Id.*

Petitioner first argues that Cousins provides an explicit motivation to combine because “*Cousins* states that its imaging device can be used with hand gestures for input to a computer,” which is the focus of Doi. *Id.* at 19 (citing Ex. 1006, 13:33–47). Second, Petitioner argues that the combined device would provide the benefit of being smaller. *Id.* at 20. Third, Petitioner argues that “combining the teachings of *Doi* and applying them to the *handheld* apparatus of *Cousins* would have been no more than the simple substitution of one known element for another.” *Id.* (citing Ex. 1003 ¶ 80).

Patent Owner argues that there are a number of issues with the proposed combination of Doi and Cousins. Prelim. Resp. 7–17. For example, Patent Owner argues that the main reason to combine provided in the Petition does not consider the actual context of Cousins. *Id.* at 9–10. As noted above, Petitioner argues that Cousins provides an explicit motivation to modify Doi to be a handheld device because “*Cousins* states that its imaging device can be used with hand gestures for input to a computer,” which is the focus of Doi. Pet. 19 (citing Ex. 1006, 13:33–47). However, Patent Owner correctly notes that Cousins teaches that using hand gestures for input is done with the combination of the handheld imaging device and an “expert system,” which is understood to be a remote computer system. Prelim. Resp. 9. Thus, Cousins is similar to Doi, in that Doi also teaches an image input unit which can do some limited processing of sensor data to

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obtain an image and then sending the data to a separate computer that performs more advanced processing. *See* Ex. 1005, 7:10–8:12, Figs. 1–3.

The Petition relies on Cousins to teach a handheld computer apparatus including the “computer means” for the advanced processing, which does not appear to be suggested by the combination. At most, Cousins appears to suggest that Doi’s image input unit be a handheld device, with a screen to display an image. However, Cousins suggests that the handheld device is insufficient to perform the more advanced processing on its own and thus does not provide an explicit motivation to modify Doi’s computer that performs the image processing to be a handheld device.

Thus, on this record, Patent Owner’s arguments appear to have merits. Nevertheless, we do not need to determine whether Petitioner’s showing for claim 7 under the combination of Doi and Cousins is sufficient in light of our determination regarding at least claim 7 under the ground based Numazaki. Therefore, pursuant to 37 C.F.R. § 42.108(a) implementing the decision in *SAS*, we institute as to all claims challenged in the petition and on all grounds in the petition. *See also* Consolidated Guide, 5–6, 64.

d) Claims 8–10 and 12

Claims 8–10 and 12 depend from claim 7. For these dependent claims, Patent Owner relies on the same arguments in connection with claim 7. Prelim. Resp. 17–19. As noted above, on this record, we find Patent Owner’s arguments appear to have merits. Nevertheless, we do not need to determine whether Petitioner’s showing for claims 8–10 and 12 under the combination of Doi and Cousins is sufficient in light of our determination regarding at least claim 7 under the ground based on Numazaki. Therefore, pursuant to 37 C.F.R. § 42.108(a), we institute as to all claims challenged in

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the petition and on all grounds in the petition. *See also* Consolidated Guide, 5–6, 64.

e) Claim 11

Dependent claim 11 recites “Apparatus according to claim 7, further including means for transmitting information.” Ex. 1001, 26:12–13. As noted previously, Petitioner argues that the “means for transmitting information” is subject to 35 U.S.C. § 112 ¶ 6, and that “[t]he structure corresponding to this function is a mobile phone link and equivalents thereof.” Pet. 17 (citing Ex. 1001, 12:65–13:3).

Petitioner argues that “*Cousins* renders obvious this limitation.” *Id.* at 32. This is because “*Cousins* contemplates that ‘interfaces to other imaging devices may also be provided to provide sharing of imaging data among other imaging devices or to **transmit imaging data to remote locations using ground-base wireless or satellite technology.**’” *Id.* (quoting Ex. 1006, 5:26–29); *see also* Ex. 1003 ¶ 122 (Petitioner’s Declarant making an identical statement).

Patent Owner notes that “the Petition fails to provide any analysis regarding whether *Cousins* discloses this limitation under Petitioner’s proposed construction of the term ‘means for transmitting information.’” Prelim. Resp. 18. Patent Owner also states that “[t]he Petition states that *Cousins* performs the recited function, but fails to address whether *Cousins* discloses the same corresponding structure that the Petition identifies in Petitioner’s proposed construction.” *Id.* at 18–19.

On this record, Patent Owner’s arguments appear to have merits. Nevertheless, we do not need to determine whether Petitioner’s showing for claim 11 under the combination of *Doi* and *Cousins* is sufficient in light of our determination regarding at least claim 7 under the ground based

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Numazaki. Therefore, pursuant to 37 C.F.R. § 42.108(a) implementing the decision in *SAS*, we institute as to all claims challenged in the petition and on all grounds in the petition. *See also* Consolidated Guide, 5–6, 64.

7. *Obviousness over Doi, Cousins, and Parulski*

Petitioner asserts that claim 13 of the '431 patent would have been obvious over Doi, Cousins, and Parulski. Pet. 33–34. Patent Owner argues that Parulski does not remedy the deficiencies Patent Owner asserts for the ground over Doi and Cousins. Prelim. Resp. 19–20.

Claim 13 depends from claim 7. As noted above, on this record, Patent Owner's arguments in connection with claim 7 under the combination of Doi and Cousins appear to have merits. Nevertheless, we do not need to determine whether Petitioner's showing for claim 13 under the combination of Doi, Cousins, and Parulski is sufficient in light of our determination regarding at least claim 7 under the ground based Numazaki. Therefore, pursuant to 37 C.F.R. § 42.108(a), we institute as to all claims challenged in the petition and on all grounds in the petition. *See also* Consolidated Guide, 5–6, 64.

C. *Discretionary Denial*

Though not involving Petitioner, the parties identify a number of parallel district court proceedings involving the '431 patent. Pet. 1; Paper 4, 1. Patent Owner initially argued that because Petitioner had not identified whether any of its members are party to the noted litigations, "Petitioner . . . has denied Patent Owner and the Board of the ability to analyze the *Fintiv* and *General Plastic* factors" to determine whether to exercise discretion under 35 U.S.C. § 314(a) to deny the Petition. Prelim. Resp. 31; *see Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*"); *General Plastic Indus. Co., Ltd. v. Canon*

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Kabushiki Kaisha, IPR2016- 01357, Paper 19 at 16 (PTAB Sept. 6, 2016) (Section II.B.4.i. precedential) (“*General Plastic*”). Petitioner and Patent Owner further address *General Plastic* and *Fintiv* in the papers and we address their arguments with respect to *General Plastic* and *Fintiv* below.

1. *General Plastic*

Patent Owner argues that “[w]hether Apple is a Unified Member is material to several of the *General Plastic* factors,” “because Apple, another defendant in the Parallel Litigations, also filed a petition for *inter partes* review of the ’431 Patent (IPR2021-00920) within a week of when Unified Patents filed this Petition.” *Id.* at 33.

The factors in *General Plastic* are relevant “to Evaluate the Equities of Permitting Follow-on Petitions” and determining whether allowing such a petition “is a Proper Exercise of Discretion Under 35 U.S.C. § 314(a).” *General Plastic* at 15. However, the petition identified by Patent Owner (IPR2021-00920) was filed after the Petition here. Prelim. Resp. 33; Pet. 52–53; Reply 7. Thus, the considerations outlined in *General Plastic* do not apply here as the present Petition is not a “follow-on petition.”

2. *Fintiv*

Under 35 U.S.C. § 314(a), the Director has discretion to deny institution of an *inter partes* review. *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review” (emphasis omitted)); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”). In determining whether to exercise discretion to deny

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institution under 35 U.S.C. § 314(a), the Board considers the advanced state of a parallel district court proceeding as part of an assessment of all relevant circumstances of the case, including the merits, in an effort to balance considerations such as system efficiency, fairness, and patent quality. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”).

When considering a parallel district court proceeding, the Board evaluates the following factors:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Id. at 5–6. In evaluating these factors, “the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

a) Evidence of a Stay

There is no evidence of record that any party to any of the parallel district court proceedings has requested a stay. Absent a stay of the related litigation and no indication based on evidence in the record that it will be stayed, this factor is neutral. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative) (finding that, absent

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evidence a stay will be granted, this factor does not weigh for or against discretionary denial); *Sand Revolution II, LLC v. Cont'l Intermodal Grp.—Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative) (finding same).

b) Court's Trial Date

When addressing trial dates, as well as when discussing certain other factors, the parties group the parallel district court proceedings between those filed in the Western District of Texas (“Western District cases”) and those filed in the Eastern District of Texas (“Eastern District cases”).¹⁰ See e.g. Reply 3, n.3.

According to the Petitioner, the Western District cases are not set for trial until March 23, 2023. Reply 3 (citing Ex. 1029, 4). At the same time, the parties agree that the Eastern District cases are currently set for jury selection and trial on March 7, 2022. *Id.* (citing Ex. 2001, 1); Sur-reply 2.

In view of one of the trial dates set for proceeding over eight months before the Board’s statutory deadline for issuing a final written decision, this factor weighs in favor of exercising our discretion to deny institution.

c) Investment in the Parallel Proceeding

The parallel district court proceedings were filed on February 4, 2021. Exs. 1024–1028. The Petition in the present *inter partes* review was filed on

¹⁰ The Eastern District cases are: *Gesture Technology Partners, LLC v. Huawei Device Co., Ltd.*, No. 2:21-cv-00040 (E.D. Tex.); and *Gesture Technology Partners, LLC v. Samsung Electronics Co.*, No. 2:21-cv-00041 (E.D. Tex.); while the Western District cases are: *Gesture Technology Partners, LLC v. Apple Inc.*, No. 6:21-cv-00121 (W.D. Tex.); *Gesture Technology Partners, LLC v. Lenovo Group Ltd.*, No. 6:21-cv-00122 (W.D. Tex.); and *Gesture Technology Partners, LLC v. LG Electronics, Inc.*, No. 6:21-cv-00123 (W.D. Tex.).

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May 14, 2021. A decision instituting or denying institution in the present *inter partes* review is due by November 26, 2021.

Petitioner argues that “[i]n the Western District cases, only the opening claim construction brief is due in November 2021 (*see* EX1029, p. 3), and all other substantive deadlines relevant to the merits of the invalidity positions . . . are scheduled in 2022; thus, most of the substantive work will occur **after** institution.” Reply 4. Patent Owner does not address Petitioner’s argument with respect to the Western District cases under this factor. *See* Sur-reply 2–3.

Since the filing of the Eastern District cases the parties have invested significant time and resources in getting the cases ready for trial. *See, e.g.*, Exs. 2001, 2002 which are Amended Docket Sheets from the Eastern District cases. For example, the Court held a *Markman* hearing on September 20, 2021 (Ex. 2002, 4), and issued a Claim Construction Memorandum and Order on October 12, 2021 (Ex. 2004). Invalidity contentions were served on Patent Owner on July 6, 2021. Ex. 2003. Patent Owner asserts that invalidity expert reports were due on October 15, 2021. Sur-reply 3 (citing Ex. 2002, 3). Further, the deadline to complete fact discovery was on October 15, 2021, and the deadline to complete expert discovery was on November 22, 2021. Ex. 2002, 3. Patent Owner also argues that “the parties will have invested substantial effort in preparing dispositive motions and *Daubert* motions related to invalidity because the deadline to file those motions is December 1, 2021, only days after an institution decision is expected.” Sur-reply 3 (citing Ex. 2002, 3).

Under this factor, we also consider whether the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted. *Fintiv*, Paper 11 at 11 (citing,

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e.g., *Intel Corp. v. VLSI Technology LLC*, IPR2019-01192, Paper 15 at 12–13 (January 9, 2020)).

In this case, the parallel district court proceedings were filed on February 4, 2021 (Exs. 1024–1028), and the Petition was filed on May 14, 2021. Preliminary infringement contentions in the Western District cases were due on July 16, 2021. Ex. 1029, 2. It is unclear when infringement contentions were due from Patent Owner in the Eastern District cases as the record does not clearly address this issue. Invalidity contentions in the Eastern District cases were served on Patent Owner on July 6, 2021. Ex. 2003. Preliminary invalidity contentions in the Western District cases were due on October 1, 2021. Ex. 1029, 2.

Thus, the Petition was filed a little more than three months after the parallel district court proceedings were filed. Further, the Petition was filed about two months before the invalidity contentions were served in the Eastern District cases; thus, the evidence shows that Petitioner did not wait to take advantage of any response by Patent Owner to the invalidity contentions. In view of these facts, we determine that a little more than three months was a reasonable time in which to prepare and file the present *inter parties* review Petition.

As explained in the *Fintiv* Order, “[t]his investment factor is related to the trial date factor, in that more work completed by the parties and the court in the parallel proceeding tends to support the arguments that the parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs.” *Fintiv*, Paper 15 at 10. In this case, substantial work has been completed by the parties and the Court in the Eastern District cases, but not in the Western District cases. The evidence

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also shows that Petitioner filed the petition in a reasonable time. In view of these facts, we determine that this factor is neutral.

d) Overlap of Issues

From the Joint Claim Construction brief, it appears that at least claims 1, 2, 4, 7, 9, 11, 12, 19 are at issue in the Eastern District cases. Ex. 1033, Exhibit A, 2–7. The claims at issue in the Western District cases do not appear to be of record. Claims 7–13 are at issue in the present *inter partes* review. Pet. 5. Thus, there is some overlap between the claims at issue here and in the Eastern District cases.

In the invalidity contentions of record from the Eastern District cases, Doi, Cousins, Parulski, Numazaki, and Rhoads are identified as relevant prior art. Ex. 2003, 55–84; Sur-reply 3. These are the same references relied upon in the present *inter partes* review proceeding. Pet. 5. Further, the invalidity contentions of record from the Eastern District cases expressly incorporate by reference the present Petition. Ex. 2003, 32.

As 1) there is only some overlap between the claims of the '431 patent involved in both proceedings, 2) the invalidity contentions from the Eastern District cases rely on the same references as the present Petition, and 3) the invalidity contentions from the Eastern District cases expressly incorporate by reference the present Petition, this factor weighs slightly in favor of discretionary denial.

e) Identity of Parties

None of the parallel district court proceedings involve Petitioner. Pet. 53; Sur-reply 4. Petitioner does acknowledge that the defendants in the parallel district court proceedings are members of Petitioner, Unified Patents. Reply 1, n.1. However, Petitioner asserts that the defendants have

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no control over the Petition and that the Petitioner “has no ability to control the district court litigants’ actions.” *Id.* at 6 (citing Ex. 1020 ¶ 6).

Patent Owner argues that Petitioner is “acting as proxy for its members” which are the defendants in the parallel district court proceedings. Sur-reply 4. Patent Owner further argues that “Petitioner admits that Unified Members ‘pay a yearly subscription fee. . . .’” and that “[i]n return for those fees, Petitioner performs various services for its members, including filing petitions for *inter partes* review.” *Id.* (quoting Ex. 1020 ¶ 2) (citing *id.* ¶ 3).

We agree with Patent Owner that Petitioner and the defendants have a relationship. However, we do not agree that it is sufficiently significant to determine that this factor should weigh in favor of discretionary denial. As noted by Petitioner, the defendants have no control over the Petition and Petitioner “has no ability to control the district court litigants’ actions.” Reply 6.

Accordingly, this factor weighs against exercising discretion to deny institution under 35 U.S.C. § 314(a). *See Fintiv*, Paper 11 at 13–14 (“If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact against exercising discretion to deny institution.”).

f) Other Circumstances and Considerations, Including the Merits

The factors considered in the exercise of discretion are part of a balanced assessment of all the relevant circumstances in the case, including the merits. *Fintiv*, Paper 15 at 14. For example, if the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution. *Id.* at 14–15.

As explained above, on the preliminary record, Petitioner has established a reasonable likelihood of prevailing with respect to at least one

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claim challenged in the Petition. However, we have also identified a number of potential issues with certain grounds. Under the facts of this case, we determine that this factor is neutral.

g) Weighing the factors—holistic view

We have considered the circumstances and facts before us in view of the *Fintiv* factors. Our analysis is fact driven and no single factor is determinative under § 314(a). Based on the circumstances presented, we determine that, as a whole, the factors weigh against our exercising discretion to deny institution of the Petition.

D. Jurisdiction over Expired Patents

Patent Owner argues that the Board does not have jurisdiction over expired patents. Prelim. Resp. 34. Patent Owner argues:

35 U.S.C. § 2(a)(1) states that the United States Patent and Trademark Office “shall be responsible for the granting and issuing of patents. . . .” The Patent Trial Appeal Board is required to “conduct inter partes reviews and post-grant reviews pursuant to chapters 31 and 32.” 35 U.S.C. § 6(b)(4). The burden of proof required to find a claim unpatentable is the preponderance of evidence, which is a lower burden of proof than the clear and convincing standard applied in district courts. 35 U.S.C. § 316(a)(9) requires that the Director “set forth standards and procedures for allowing the patent owner to move to amend the patent under subsection(d).” This is due, in part, to the fact that there is a lower burden of proof required to invalidate a patent before the Board.

Id.

Patent Owner appears to be arguing that, because 35 U.S.C. § 316(a)(9) requires the Director to establish procedures to allow for amendments of patents and that as expired patents cannot be amended, we do not have jurisdiction over expired patents in *inter partes* review. *Id.* Patent Owner concludes that as “[t]he ’431 Patent has expired, . . . the

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opportunity to amend the '431 Patent is not available to Patent Owner” and therefore “determinations regarding the validity of this expired patent should be reserved for Article III courts under the clear and convincing standard.”

Id. at 34–35.

Inter partes review of patents, whether expired or not, fits within the USPTO’s mandate “for the granting and issuing of patents” (35 U.S.C. § 2(a)(1)), for as the Supreme Court has stated “[i]nter partes review is ‘a second look at an earlier administrative grant of a patent’” (*Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1374 (2018) (quoting *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144 (2016)). Our rules have also made clear that *inter partes* review covers expired patents. 37 C.F.R. 42.100(b) (2012); *see also e.g.*, 83 FR 51341 (Oct. 11, 2018) (Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board)¹¹ (“The claim construction standard adopted in this final rule also is consistent with the same standard that the Office has applied in interpreting claims of expired patents and soon-to-be expired patents. *See, e.g., Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1279 (Fed. Cir. 2017) (noting that “[t]he Board construes claims of an expired patent in accordance with *Phillips* . . . [and] [u]nder that standard, words of a claim are generally given their ordinary and customary meaning”).”).

Further, the statutes governing *inter partes* review do not limit them to non-expired patents. For example, 35 U.S.C. § 311(b), which sets forth the scope of *inter partes* review, merely refers to patents, with no mention of the

¹¹ Available at <https://www.federalregister.gov/d/2018-22006/p-13>.

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expiration date. Further, 35 U.S.C. § 311(c), entitled “Filing Deadline,” makes no mention of the expiration date of the patent. Elsewhere, 35 USC § 315 does limit the filing of *inter partes* reviews based on civil actions and the serving of complaints, but again makes no mention of the expiration date of the patent. Patent Owner does not identify any statute that expressly limits *inter partes* review to non-expired patents.

Patent Owner fails to adequately explain why the requirement to establish procedures to allow for amendments to a patent means that expired patents are not subject to *inter partes* review. For example, the statute does not mandate that amendments to the patent be allowed in all cases.

For all of these reasons, we do not agree that the Board lacks jurisdiction over expired patents.

III. CONCLUSION

For the foregoing reasons, we have determined that there is a reasonable likelihood that the Petitioner would prevail with respect to at least one of the claims challenged in the Petition. We therefore institute trial as to all challenged claims on all grounds stated in the Petition.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, *inter partes* review of claims 7–13 of U.S. Patent 7,933,431 B2 is instituted on all grounds in the Petition;

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial will commence on the entry date of this decision.

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